

Remarks

The final Office Action provided a final rejection of all pending claims 34-48 and 51-56. The Applicant respectfully requests reconsideration of this final rejection of the claims.

Rejection of Claims Under 35 U.S.C. §112

The final Office Action rejected claims 34-48 and 51-56 under 35 U.S.C. §112, first paragraph, for failure to meet the written description requirement. This rejection is respectfully traversed.

In support of the rejection, the Examiner stated, "[t]he applicant incorrectly correlates an increase in velocity with an application of power applied to the load." (final Office Action, page 3, lines 4-5, emphasis added). Contrary to the Examiner's position, the Applicant respectfully submits that the written description establishes a clear correlation between an increase in velocity and the application of power to the load.

The Examiner correctly identifies FIG. 4 as a voltage profile of voltage v. motor velocity. In the "Brief Description of Drawings" section of the specification, FIG. 4 is specifically described as "a graphical representation of a spindle motor start-up profile which can be used in the apparatus of FIG. 2."

It is clear that the "spindle motor start-up" profile of FIG. 4 is applied during a "spindle motor start-up" operation, pursuant to the flow of FIG. 5, and that such start-up (acceleration) of the motor involves the application of power thereto. Indeed, the Applicant cannot identify any way for the motor to undergo a start-up operation except from the application of power to the motor. Regardless, it is incontrovertible that the written

description establishes that the profile of FIG. 4 is applied during application of power to the load, and such profile results in an increase in velocity of the motor.

The Examiner has further taken the position that, "the specification does not disclose a profile whose values decrease in magnitude during application of power to the load" (final Office Action, page 2, lines 17-18, emphasis added). As before, this conclusion is respectfully traversed.

The specification makes it abundantly clear that the profile of FIG. 4 represents a "profile of said thresholds that decrease in magnitude during application of power to said load," as claimed. See, for example, the following excerpt from the specification:

The voltage comparator 318 is preferably a one-shot comparator which starts the programmable timer/counter circuit 324 to disable the motor drivers 320 when the voltage at the terminals of the capacitor 312 exceeds the voltage provided by the DAC 310. The motor drivers 320 are then disabled for a programmed amount of time before the cycle repeats. The cycle is repeated by re-engaging the motor drivers 320.
(Specification, page 7, beginning at line 27, as amended by the Applicant's Response of September 17, 2004)(emphasis added)

The voltage values provided by the DAC 310 respectively correspond to the values of the profile of FIG. 4. See specification, page 7, lines 16-18 ("The reference voltage from the DAC 310 is determined by a preprogrammed velocity dependent reference profile 400 as illustrated in FIG. 4.").

With regard to the actual language set forth by the claims, claim 34 generally features that "power is removed from a load when the cumulative amount of charge is at least equal to a predetermined value." The claim recites "a value," and this is singular in

tense. Thus, this portion of the claim language does not require that value to change during this comparison step.

The next portion of claim 34 generally features that the “predetermined value” is selected “from a profile of said values that decrease in magnitude during application of power to said load.” It is thus the profile of values that sequentially decrease in magnitude during successive application, and this is fully and completely satisfied by the written description.

The test for whether the written description requirement is met is whether the disclosure of the application reasonably conveys to the ordinary artisan that the inventor had possession at that time of the later claimed matter. See *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555 (Fed. Cir. 1991); *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313 (Fed. Cir. 2003).

The Applicant respectfully submits that, in view of the actual claim language employed, one having ordinary skill in the art would readily view the above language of claims 34, 41 and 47 as being met including by the profile 400 of FIG. 4 and the above excerpts from the specification.

Accordingly, the Applicant submits that the requirements of §112, first paragraph are fully satisfied, and requests reconsideration and withdrawal of the rejection of the claims under §112, first paragraph.

Rejection of Claims Under 35 U.S.C. §103(a)

Claims 34-48 and 51-56 were finally rejected under 35 U.S.C. §103(a) as being rendered obvious over U.S. Patent No. 4,967,291 to Touchton (“Touchton ‘291”) in view of

U.S. Patent No. 5,612,580 to Janonis ("Janonis '580"). This rejection is respectfully traversed.

The Examiner has posited that it is possible to configure the counter 522 in Janonis '580 to provide successively decreased lower output voltages by the DAC 524, and in view of this one skilled in the art would be motivated to arrange such values into a "profile of said values that decrease in magnitude during application of power to said load" that could be applied by the circuit in Touchton '291. The Applicant respectfully submits that one skilled in the art would not be motivated to make such a combination, and that one skilled in the art would not consider such a combination either desirable or operable.

When the integrated current value in Touchton '291 reaches the predetermined threshold, Touchton '291 teaches to turn off transistors Q1-Q4 so that applied current flow through coil 18 is temporarily ceased. Col. 7, line 56 to col. 8, line 4. In this way, the Touchton '291 circuit operates as an upper velocity limit ("Consequently, no further acceleration will be imparted by coil 18 to head actuator 12, and so the velocity of head actuator 12 will never rise above the predetermined threshold velocity." Col. 8, lines 4-7, emphasis added).

The predetermined threshold velocity is a maximum safe velocity. It is thus not clear why a "profile of said values that decrease in magnitude during application of power to said load" would be useful, or even desirable in Touchton '291. Since Touchton '291 integrates the coil current to estimate coil velocity, once the transistors Q1-Q4 are turned off, further integrated values are "blind" and cannot be relied upon to indicate the actual coil velocity. See e.g., See col., 8, lines 49-59. Thus, one skilled in the art would not have

a reasonable expectation of success by using the recited “profile of said values that decrease in magnitude during application of power to said load.”

The Applicant reminds the Examiner that the claim does not merely recite that the predetermined value is selected from a population of values *per se*. If so, then the Examiner’s suggestion that one skilled in the art would be motivated to provide different values to account for different operating conditions or different motors might have merit.

However, the claim explicitly sets forth the “profile of said values that decrease in magnitude during application of power to said load.” The Examiner has only been able to supply the “profile” and the “decrease in magnitude” limitations of the claim via improper hindsight reconstruction. Evidence of motivation to combine must be “clear and particular,” and no such evidence has been provided. See *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999).

Accordingly, the Applicant respectfully submits that the rejection of independent claim 34 under §103(a) is improper and that claim 34 defines subject matter that is patentably distinct over the art of record. The Applicant requests reconsideration and withdrawal of the rejection of claim 34 as well as for the claims depending therefrom.

As independent claims 41 and 47 similarly set forth subject matter that is patentable over the art of record for the reasons set forth above, the Applicant further requests reconsideration and withdrawal of the rejections of these claims, as well as for the claims depending therefrom.

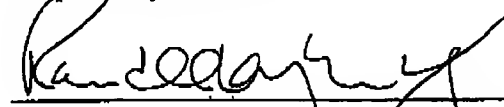
Conclusion

This is intended to be a complete response to the final Office Action mailed September 1, 2005. The Applicant respectfully requests reconsideration and allowance of all of the claims pending in the application.

The Examiner is invited to contact the below signed Attorney should any questions arise concerning this response.

Respectfully submitted,

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